Quick intro

- I represent Duke Energy
- SERC
  - RC Agent for VACAR South
  - BA
  - TOP
- FRCC
  - BA
  - TOP
- RFC
  - BA
  - TOP
- NERC and SERC OC experience
- Event Analysis Subcommittee experience
- DISCLAIMER: THE FOLLOWING ARE MY THOUGHTS ON.....
  - Event Analysis
  - Lessons Learned
  - System Operations Improvement
So, what is Event Analysis??

In my opinion,
- Core component of an operational excellence/reliability excellence focused culture
- Core to human performance improvement
- Core organizational discipline
- Merits organizational recognition
- Organizational encouragement/incentives

But, what is it??
- The aggressive and ongoing self critical review of operational events that drives change (fix the mousetrap defense) and/or improvement (find the better mousetrap)
- It thrives at the registered entity level
- Leverages industry expertise
- Changes and improvements are plowed back into the industry
- It creates a strong accountability between registered entities

WE ARE “HOSTAGES OF EACH OTHER”
Event Analysis by another name….

- College Football
  - Self Scouting
  - If we were playing ourselves, how would we attack our weaknesses?
    - You have to be brutally honest
    - You have to be open to criticism
    - You have to keep you eyes on the prize – getting ready to win the next game
  - Take the time to review your team
  - Address and improve on what you find
  - Happens during game
  - Happens during the season
  - Happens in the off season
- Objectives
  - Fix what is broken (real time)
  - Improve the fix (operational planning horizon)
Let's dig in here....

- Event Analysis
  - Core component of culture
  - Supported and encouraged discipline
  - Merits organizational recognition
  - Organizational encouragement/incentives
  - Fix the mousetrap
  - Improve the mousetrap
  - Thrives within the registered entity
  - Leverages industry expertise
  - Improvements are plowed back into the industry
  - Strong accountability between registered entities

- WE ARE IN THIS TOGETHER
Why make the effort??

- Why do college football teams make the effort??
  - To get better and WIN GAMES
  - Learning and adapting

- Why should registered entities make the effort??
  - To learn from our experiences
  - To learn from others’ experiences
  - To improve reliability
  - TO WIN

- What is WINNING to a registered entity??
  - Better defense in depth
  - Better decision making
  - Better resilience
  - Better situational awareness
What kind of effort does it take??

- **College Football**
  - Commit staff to do the self scouting
  - Commit to learn and adapt

- **Registered Entities**
  - Commit experienced staff
  - Commit to learn and adapt
  - Develop a sustainable process
  - Make it visible

- Yes, I know what you are probably thinking
  - We can hardly keep real time operators on staff
  - Our budget is being squeezed
  - Our staff is being squeezed
  - We are in the process of hiring compliance staff
Here is how Duke approached Event Analysis

- Prior to 2012,
  - Make assigned as events happened
  - No dedicated staff
  - Tried to follow the NERC EA process
  - Produced solid reports
  - Produced questionable lessons learned
  - Did not squeeze all of the learning out of the events
  - Typically, focused on the bigger events that were easy to recognize
    - Relay events
    - EMS outage events
    - Multiparty events
    - Events that drew attention of regulators
  - We put the fire out when we saw the flames and moved onto the next burning issue
Post merger – different model

- Staff organization with System Operations Services
  - ERO Support and Event Analysis
    - Lead by experienced and industry involved Manager
    - EA leads located in every geography
    - EA expertise in every control center location
    - Team build around experienced staff
    - All have done EA in the past
    - We have the organization

- How is it working?
  - Good for internal to System Operations events
  - We have done several EA efforts across all geographies
  - We have challenges with events that cut across internal organizations
  - We are still working on producing meaningful lessons learned
  - We are committed to the ERO EA process
  - We are committed to the emerging NATF process
  - We are committed to reaching out and working with other registered entities
What are our concerns??

- **Sustainability**
  - This mindset has to become organic to system operations organization

- **Meaningful/impactful lessons learned**
  - Winning = lessons learned that drive action that results in improvement
  - Losing = anything less

- **Registered Entity accountability**
  - We are in this together
  - If one of us messes up, it impacts all of us
  - We are very similar to the nuclear industry right around 3-Mile island
  - We really need to learn from the nuclear experience
Closing observations....

- EAS is focusing on the EA process independent of
  - C......
  - Organization running it

- EA Goals
  - Better Reports
  - Better Lessons Learned
  - BOTTOM LINE:
    - Lessons learned that drive improvement

- Right now, we are missing on the bottom line

- Operations has to make the case for EA commitment
  - If not us, then who ??
What benefits do I see in my role as EA Subcommittee chair??

- Large degree of information sharing through Lessons Learned
  - 4 EMS-related LL recently posted on NERC’s website
- Ability to trend events
  - Particularly useful for identifying problems arising from smaller category events
- Work with other industry groups to understand events and find ways to prevent them
  - Transmission and Generation Forums